



Clever thinking at work



3M Safety Solutions

We believe that health and safety is first and foremost about safeguarding your worker's welfare. Preventing occupational ill health is a key priority for everyone, particularly in construction where the broad variety of activities found on site make the industry one of the most hazardous to work in. 3M has not set any limits on helping you to create a working environment that's safe and sound, and we make it our goal to offer you exceptional Personal Protective Equipment backed by unrivalled support.

3M™ Respiratory Protective Equipment

The guide below is designed to help you select the most appropriate respiratory protection for a range of typical construction activities, whilst the rest of the brochure gives you information on the wide range of PPE and support available from 3M.

	Respiratory Protection					
	Disposable				Reusable**	Powered Air***
	FFP1*	FFP2*	FFP3*	WELDING* (FFP2)	HALF OR FULL FACE MASK	
Earth moving					●	●
Piling					●	●
Underpinning					●	●
Groundwork	●	●	●		●	●
Demolition	●	●	●	●	●	●
Metal cutting				●	●	●
Metal grinding		●	●	●	●	●
Welding				●	●	●
Tunnelling	●	●	●		●	●
Cutting cement/concrete		●	●		●	●
Scabbling	●	●	●		●	●
Shot creting		●	●		●	●
Woodworking		●	●		●	●
Plastering	●	●	●		●	●
Tiling	●	●	●		●	●
Handling loft insulation			●		●	●
Painting (not Isocyanate)					●	●
Roof felting					●	●
Road surfacing					●	●
Timber treating					●	●
Working with Adhesives/Sealants					●	●
Working with Low Level Asbestos			●		●	●
Asbestos removal						●

* FFP1 disposable respirators for low levels (up to 4x Workplace Exposure Limit (WEL)) of fine dusts and mists. FFP2 for moderate levels (up to 10xWEL) of fine dusts and mists. FFP3 for higher levels (up to 20xWEL) of fine dusts and mists.

** A range of filters is available for these respirators. For selection advice please visit the online 3M Respirator Product Selector at www.3m.com/uk/ohes or call the 3M Health and Safety Helpline on 0870 60 800 60 (UK) or 1 800 320 500 (Ireland).

*** A range of Powered Air Respirators is available. Visit www.3m.com/uk/ohes or call the 3M Health and Safety Helpline on 0870 60 800 60 (UK) or 1 800 320 500 (Ireland).

Dust, cement, chemicals – all hazards present on site. 3M has worked hard to understand what makes people use a product. Comfort is critical, so we've gone far beyond the basic standard requirements and made our products as comfortable as possible, so your workers not only wear them, but **want** to wear them.

Fit Testing

In the UK wearers of tight-fitting respirators featured in this guide should be fit tested as required under the Control of Substances Hazardous to Health Regulations (COSHH). 3M can provide qualitative fit test kits suitable for testing wearers of disposable respirators and half face masks fitted with particle filters. The kits rely on a 'taste test' to assess the level of fit of the respirator to the wearer's face. Two versions are available; FT10 (sweet) and FT30 (bitter). 3M supports the Fit 2 Fit Accreditation scheme for fit testers, visit www.fit2fit.org

Selecting and specifying the appropriate respiratory protective equipment can seem daunting with so many factors to consider. With our simple three-stage selection system however, it's easy to make sure the disposable respirator you choose is offering the correct levels of protection and comfort required by your employees.

STAGE ONE Which protection factor suits your needs?

	FFP1 Respirators	FFP2 Respirators	FFP3 Respirators	Speciality Respirators
Protection factor	APF 4	APF 10	APF 20	APF 4 or 10
Typical applications	Low level fine dust/oil or water based mists (hand sanding, drilling and cutting)	Moderate level fine dust/oil or water based mists (plastering, cement, sanding and wood dust)	Higher level fine dust/oil or water based mists (hazardous powders, biological agents and fibres)	Fine dust/oil or water based mists. Options for metal fume, ozone and nuisance levels of certain gases and vapours dependent on model
Easy identification	Identified by YELLOW straps	Identified by BLUE straps or valve lettering	Identified by RED straps or valve lettering	Protection level can be identified by the strap colour or valve lettering

Classification explained

When correctly used by a wearer who has passed a face fit test, an FFP1 respirator should reduce exposure to airborne particles by a factor of 4, an FFP2 by a factor of 10 and an FFP3 by a factor of 20.

STAGE THREE What style?

Choose from our **Classic**, **Comfort** or **Premium** ranges or a **Welding** or **Speciality** respirator for specific applications.

Some of our ranges offer a cup-shaped and flat-fold respirator for your preference.

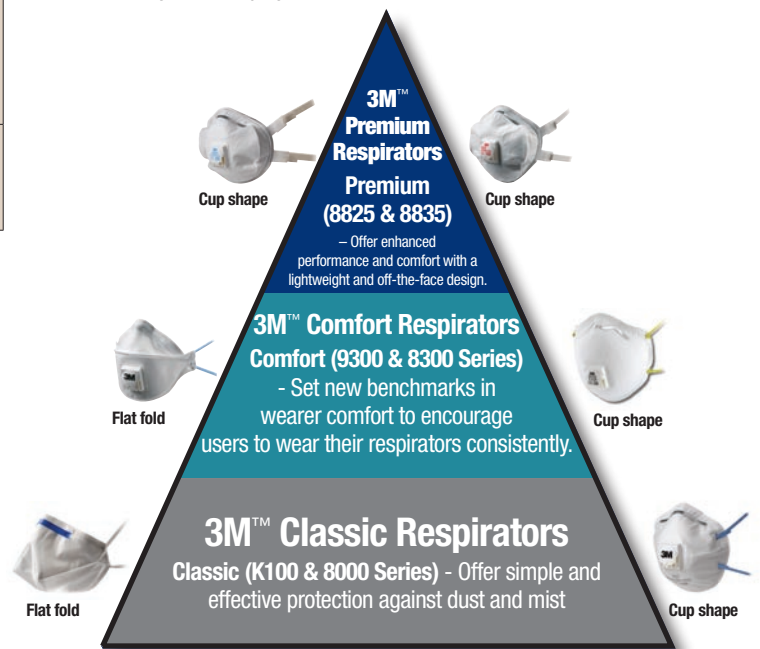
STAGE TWO Choose a valved or unvalved respirator?

Benefits of a valved respirator

- Reduces exhalation effort
- Cooler to wear
- Stays comfortable for longer
- Less likely to mist up eyewear

Benefits of a non-valved respirator

- Lower unit cost
- Prevents the wearer from contaminating their environment



Disposable Respirators for protection against dusts

All 3M disposable respirators feature 3M™ Advanced Electret Filter media which combines highly effective filtering performance with low breathing resistance for a comfortable wear.



3M™ K111 Classic Dust/Mist Respirator
EN149:2001+A1 2009 NR D

- Diamond-shaped front allows the respirator to maintain its shape in hot and humid environments
- Single loop strap allows easy adjustment on the face and head
- Available in FFP1 ● FFP2 ● FFP3 ●
- Valved and unvalved versions available



3M™ 8322 Comfort Cup-shaped Valved Dust/Mist Respirator
EN149:2001+A1 2009 NR D

- Advanced Electret filter material helps to breathe easily for more comfortable protection
- The shell construction offers added durability
- The cushioned inner lining helps to stay comfortable
- Available in FFP1 ● FFP2 ● FFP3 ●



3M™ 8835 Soft Seal Valved Dust/Mist/Metal Fume Respirator
EN149:2001+A1 2009 R D

- Adjustable straps for individual fit
- Comfortable, lightweight off the face design
- Inner face seal for comfort and prolonged use
- Available in FFP2 ● FFP3 ●

Reusable Respirators

for protection against dusts and/or gases and vapours*

The 3M™ Reusable Respiratory Range can be used with a wide range of filters that offer effective protection against gases, vapours and particles. For prolonged periods of use, half and full face masks by 3M offer exceptional value and quality, with unrivalled comfort with ease of use.



3M™ 3000 Series Half Mask Respirators

- Compact and lightweight
- Available in two sizes small/medium and medium/large
- Features an elastomeric face seal with a single particulate (P2), organic vapour (A1) or combination (A1P2) filter



3M™ 4000 Series Maintenance Free Respirator EN405: 2002

- Unique design with integral filters
- Exempt from maintenance requirements of COSHH if disposed off within the month
- Four versions offering combined particulate and gas/vapour protection
- Resealable bag provides convenient and clean storage between uses



3M™ 7500 Series Half Masks EN140:1998

- Soft pliable face seal for premium comfort
- Adjustable head harness giving individual fit
- 3M™ Cool Flow™ Valve reduces heat and moisture build-up
- Use with 6035 filters for easy, wipe clean P3 particulate protection (APF20)**

* 3M has a range of filters to fit 3M reusable half and full face masks. To find the most suitable filter for your application visit www.3m.co.uk/ohes and click on the 3M Respirators Product Selector or call the Health and Safety Helpline on 0870 60 800 60 (UK) or 1 800 320 500 (Ireland).

** APF = Assigned Protection Factor.

Powered Air Respirators

for protection against dusts and/or gases and vapours

3M manufacture a full range of battery powered and supplied air (air-line) respiratory protective systems. These are available in a simple 'build your own' modular format or as complete systems depending on user preference. Where multiple items of PPE including respiratory protection are required for longer time periods, these systems are a comfortable and convenient alternative. Visit [www.3M.co.uk/ohes](http://www.3m.co.uk/ohes) for further information or call the 3M Helpline on 0870 60 800 60 (UK) or 1 800 320 500 (Ireland).

Built with flexibility
to change in the future



Welding Shields

Comfortable protection for safer welding

3M™ Speedglas™ Auto-darkening Welding Shields have been designed to provide lighter weight, while maintaining the performance and protection that welders need.



3M™ Speedglas™ 100 Hard Hat Welding Shield with Auto-Darkening Filter variable 3/8-12

Exceptionally lightweight, but powerful in performance, the new shield offers the premium qualities of the Speedglas range at an affordable price.

- Reliable light-to-dark switching (dark shade 8-12).
- Can be used with most arc welding processes, such as stick (MMA), MIG/MAG, and many TIG applications
- Comes with the 3M™ Peltor™ G3000 Hard Hat, which is one of the lightest hard hats in the market

Head and Face Protection

3M offers a wide range of comfortable helmets with many accessories incorporating 3M Uvicator™ technology.



3M™ Peltor G2000 Uvicator Helmet

- Peltor Uvicator technology tells you when it's time to replace your helmet
- G2000 helmet allows free airflow between the helmet and its harness
- Ventilation inlet in the top of the helmet helps to increase comfort
- Extended edge on the back of the helmet provides extra protection for the sensitive neck area



3M™ Peltor G2000 Uvicator Helmet with integrated eyewear

- Eyewear available in clear, yellow and grey lenses
- Helmet available in different colour options



3M™ Peltor G2000 Uvicator Helmet with mounted earmuffs

- 3M™ Optime™ I, II or III mounted earmuffs available
- Helmet available in different colour options

3M™ Hearing Protective Equipment
















Construction sites are noisy places. That is why it is important to ensure your workforce is protected. At 3M we understand that the hearing protection you choose for your workers must be comfortable, easy to use and reduce noise by just the right amount.





Our online tool lets you input noise levels from your site and suggests the most appropriate solution from our wide range of ear plugs and muffs.

Factors affecting the selection of Hearing Protective Equipment

- Suitability for the work carried out
- Compatibility with other Personal Protective Equipment
- Ability to communicate
- Environmental factors
- Comfort and user preference
- Maintenance
- Wearer isolation risks if over-protecting
- Pattern of noise exposure

The table below shows the likely noise exposures of some typical construction activities.*

Activity	Likely noise exposure (average) LEP,d	
Blasting	100+	
Piling Worker	100+	
Digging/scabbling	100	
Concrete pouring	97	
Shovelling	94	
Carpenter	92	
Wheeled loader driver	89	
Concrete grinding	85+	
Sandblasting	85+	
Guniting	85+	
Concrete chipping/drilling	85+	
Mill worker crushing	85+	
Asphalt paving	85	
General labouring work	84	
Bricklayer	83	

83 dB(A) - 93 dB(A) You must assume you are above the permitted exposure level, hearing protection is compulsory.	
87 dB(A) - 98 dB(A) You are above the permitted exposure level, hearing protection is compulsory. Ideal for high frequency noise.	
94dB - 105dB(A) You are above the permitted exposure level hearing protection is compulsory. Ideal for high and medium frequency noise.	
95 dB(A) - 110 dB(A) You are above the permitted exposure level, hearing protection is compulsory. Ideal for all frequencies.	

*Source: HSE INDG 127 'Noise in Construction'

3M™ Noise Indicator

- Flashes red when noise levels are above 85dB and hearing protection is needed
- Simple, lightweight, easy-to-use, inexpensive
- Long battery life with rechargeable battery
- Device should be worn in a visible area using a simple clip or lanyard through the top loop.
- Size: 5 cm x 3.6 cm x 1.3 cm
- Lightweight: 17g



3M™ Hearing Protection

for protection, comfort and ease of use.



3M™ 1100/1110 Disposable Earplugs

- Soft, hypoallergenic foam provides low pressure inside the ear
- Special formulation less prone to soak up water in humid environments
- Smooth surface helps prevent picking up unwanted dirt
- Attenuation 37dB (SNR)



3M™ E-A-R™ Express™ Earplugs

- The unique pod design allows the foam to compress easily so the plug slides gently into the ear and expands slowly
- The insertion grip makes handling easier
- No roll down required
- Attenuation 28dB (SNR)
- Made from moisture resistant foam ideal for hot/humid working conditions



3M™ E-A-R™ E-A-RCaps™ Banded Earplugs

- Soft, smooth polyurethane cap design
- Reusable with replacement pods
- 3M™ Flexicap™ features hinged headband allowing for a variety of wearing positions without compromising other forms of PPE
- Attenuation 23dB (SNR)



3M™ E-A-R™ Ultrafit™ Earplugs

- Premoulded earplugs
- Provides high level of attenuation
- Fits most ear canals
- Attenuation 32dB (SNR)
- Comfortable and provides excellent fit



3M™ E-A-R™ Push-Ins™ Earplugs

- A gentle push is all it takes for easy, consistent fitting
- Flexible stem allows hygienic insertion
- Tip is shaped and sized to mould comfortably to fit ear canals
- No roll down required
- Attenuation 38dB (SNR)



3M™ Peltor™ Optime™ I,II,III Earmuff

- Lightweight providing high wearer comfort
- The sealing rings are broad and filled with soft plastic foam for the best fit and low contact pressure
- A range of attenuation levels available
- Dielectric version available without visible metal parts and also Hi-Viz for use on road construction sites, airports or other high-risk workplaces
- Neckband, headband, folding and helmet mounted options available



3M™ Peltor™ Lite-Com™ Basic

Built-in two-way Communication Headset

- Communication on 8 channels in the PMR 446 MHz band
- 38 subchannels allow several user groups to communicate without listening to other groups on the same channel
- An electronic voice in the receiver tells you the settings of the device
- Automatically switches off when unused to save the batteries



3M™ Peltor™ Dect-Com™ Portable Unit

LDCS1, DCS11

- Working range about 300 metres extension possible to about 600 metres with repeaters
- 3M™ Peltor™ J11 Connector works with all 3M™ Peltor™ Standard Headsets
- Voice activated transmission, VOX, for blocking unwanted ambient sounds, or fully open microphone
- Conversation time up to about 15 hours
- Available with PTT button for control of external equipment connected to the base unit



3M™ Peltor™ Dect-Com™ Base Unit

- Full duplex, short range wireless intercom system for effortless and reliable communication with 4 or 8 portable units in conference
- High secrecy by digital transmission
- Power supply 230 V AC or 9-28 V DC with back-up battery for temporary power failure
- Line in / line out connection for external equipment; com. radio, alarm, telephone line etc.

3M™ Eye Protection

With protective eyewear often mandatory on construction sites, it's important that it is comfortable to wear for long periods.

3M safety spectacles and goggles include anti-scratch and anti-fog coatings as standard and are designed to be compatible with 3M respiratory protection – reducing the common problem of safety eyewear ‘misting up’. Impact protection from low energy, high speed particles. Ultra violet protection e.g. general site use.



3M™ 2720 and 2721 Series Classic Line Spectacles

- Lightweight and offers the wearer high levels of comfort together with reliable protection
- Slim nose bridge and flat temples for improved compatibility with other PPE
- Stylish and modern design
- Available in 2 lens options: clear and grey



3M™ Tora™ Classic Line Safety Spectacles

- Extremely lightweight at only 22g
- Supplied with an adjustable and easy to attach headband
- Available in 3 lens options: clear, bronze and yellow



3M™ 2840 Comfort Line Spectacles - clear

- Adjustable temple arms for comfort and optimal fit
- Integrated browguard for increased protection
- Choice of lens options including clear, smoke, yellow and indoor/outdoor



3M™ Solus™ Comfort Line Safety Spectacles

- Purity of curved lens design provides user with optimal field of vision and coverage of eyes
- Lightweight at only 23g
- Available in six lens options: clear, bronze, yellow, indoor outdoor, red mirror and blue mirror



3M™ Maxim™ Comfort Line Safety Spectacles

- Unique aspherical lens for 180° of pure vision
- Ventilation channel across the lens to minimise misting
- Soft, universal-fit nose bridge and dual-injected cushion browguard for extra comfort
- Available in four lens options: clear, bronze, indoor outdoor, yellow.
- Also available in welding version IR 3.0 + IR 5.0



3M™ Metaliks™ Sport Premium Line Safety Spectacles

- Formable rubber tipped temples for extra comfort and adjustability
- Curved lens for superior eye coverage and optimal field of vision
- Available in four lens options: clear, yellow, blue mirror and grey



3M™ LED Light Vision™ Premium Line Safety Spectacles

- Equipped with adjustable ultra-bright LED with long battery life (over 50 hours)
- Frame has rubber temples and rubber nose pads for extra comfort
- Polycarbonate anti-fog lens protects against UV and impact at extreme temperatures.
- Ideal for lighting a dark zone while protecting your eyes and having hands-free for working
- Headlights available as a separate item



3M™ 2800 Series Safety Goggles

- Modern slim design combined with excellent field of vision
- Available in either sealed (for additional protection against fine particles and gases) or indirect ventilated designs (for improved air circulation and reduced fogging in hot / humid conditions)
- Polycarbonate or acetate lens options



3M™ Fahrenheit™ Comfort Line Safety Goggles

- Soft PVC crystal frame with a wide support area all around the face to enhance comfort
- Can be worn in combination with prescription glasses, particulate respirator or a half mask
- Special helmet attachment model available to use with 3M™ Peltor™ G3000 Helmet.
- Available in ventilated polycarbonate lens option and non ventilated acetate lens option

3M™ Protective Coveralls

3M has a select range of high quality stylish Protective Coveralls offering breathable comfort and protection you can rely on. The range provides peace of mind for effective use and protection against most industrial hazards.

Core 3M Features - All the products of the range comprise the following features

- Elasticated hood, waist and ankles for convenient safe wear and freedom of movement
- Two-way zip with resealable flap for extra convenience and protection from contaminants
- Reinforced gusset for increased robustness
- Knitted cuffs for increased wearer comfort
- Anti-static
- No components made from silicone or natural rubber latex
- Sizes: from M to XXL



3M™ 4530 Protective Coverall Type 5/6
“Breathable Comfort for all day”

- Very breathable material for reduced heat stress and comfortable wear, yet providing excellent protection against hazardous dusts and liquid chemical splashes (type 5/6)
- Flame retardant index 1/0 when used over an index 2 or 3 fire retardant material
- Colour – Blue



3M™ 4540 Protective Coverall Type 5/6
“Combined Performance and Comfort”

- Laminated microporous material offering excellent robustness and low linting properties
- Breathable back panel for improved air circulation and reduced heat stress
- Excellent protection against hazardous dusts (including particulate radioactive contamination) and liquid chemical splashes (type 5/6)
- Colour – White



3M™ 4565 Protective Coverall Type 4/5/6,
“Extra Protection and Durability”

- Improved laminated microporous material offers excellent robustness and low linting properties
- Taped seams for better protection and durability
- Excellent protection against hazardous, liquid chemical splashes and sprays (type 4/5/6)
- Colour - white with red seams
- Triple panel hood for better fit and comfort

Breathable
comfort and
protection you can rely on



Other Products available from 3M

High Visibility

Often, the safety of workers comes down to being seen, especially in the dark. Being hit by a moving vehicle is the third most common cause of injury in the construction sector. It is vital that workers wear reflective clothing offering maximum instant visibility and incorporating reflective components from a reputable manufacturer.

3M™ Scotchlite™ Reflective Materials provide brilliant reflection in vehicle headlights, ensuring construction workers are easily visible to drivers, so reducing the risk of accidents.



3M offers a range of reflective materials that:

- Are EN471 compliant
- Provide consistently high levels of brightness through 360°
- Are comfortable and light in weight
- Are easy to store and fold
- Are cost effective

For use on high visibility garments worn on construction sites, 3M provides:

- Scotchlite reflective material 8725 – a high durability, heat applied transfer film that forms a comfortable integral part of the garment.
- Scotchlite reflective materials 8910, 8925, 9910 and 9920 – sew on fabrics offering different levels of durability and wash temperatures.
- Scotchlite reflective material – High Gloss 7180 incorporating micro prismatic technology for a differentiated look.

3M™ Sorbents

3M sorbents can be used in a wide variety of applications ranging from simple maintenance to emergency spill clean-up. Sorbents help ensure your workplace is kept clean and safe and reduce damage to the environment.

Some can be used for general maintenance applications while others are designed to handle petroleum or chemical spills and clean-up.

- 3M™ Maintenance Sorbents – ideal for absorbing oil and other industrial fluids cleanly, safely and efficiently.
- 3M™ Oil Sorbents – for absorbing oil not water. Being hydrophobic (repels water) they are ideal for absorbing oil from areas where water may also be present.
- 3M™ Chemical Sorbents are the ideal solution for hazardous spill control. They provide very high absorption capacities and are suitable for absorbing a very wide range of liquids – even aggressive acids and alkalis.



3M™ Safety-Walk™ Antislip Surfacing

Antislip surfacing offers a full range of floor level safety products to minimise risk in many industrial applications. Our antislip surfaces reduce slip, trip and fall accident rates helping to keep down compensation claims and insurance premiums



General Purpose Grade

- Abrasive particles bonded by a tough, durable polymer to a dimensionally stable plastic film to provide an effective antislip surface in most shoe traffic applications.

Coarse Grade

- Large abrasive particles bonded by a tough, durable polymer to a dimensionally stable plastic film to provide an effective antislip surface in most shoe traffic applications.

Conformable Grade

- Abrasive particles bonded by a tough, durable polymer to an aluminium foil to conform to irregular surfaces

For further advice, information and technical support about the 3M safety range of protective equipment, simply contact 3M Health and Safety through our dedicated helpline or on our website. 3M Health and Safety Helpline **0870 60 800 60** (UK) **1 800 320 500** (Ireland) 3M Health and Safety Online www.3M.co.uk/ohes

Help and support

Need advice?



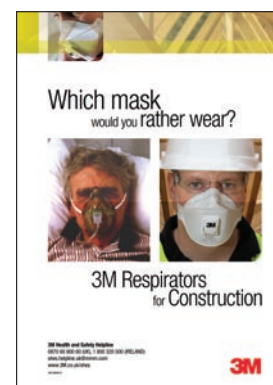
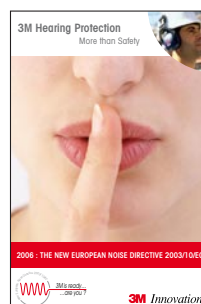
For advice, information and technical support about the 3M range of personal protective equipment, simply contact our dedicated Health and Safety helpline to talk to one of our specialists.

- Specialist support on all aspects of 3M PPE from selection to fitting and training
- Technical Bulletins on many hazard topics (e.g. asbestos)
- Guidance on regulatory issues (e.g. COSHH Compliance, fit testing)

Training Tools

Help educate your workforce on the need for PPE and the importance of its correct usage by using our handy tools:-

- Fitting Videos for most 3M respirators
- Downloadable Toolbox Talks to aid employee awareness (see www.3M.com/uk/construction)
- Safety Awareness Videos (Respiratory, Hearing, Sorbents)
- PPE Awareness Posters
- PPE Fitting Posters



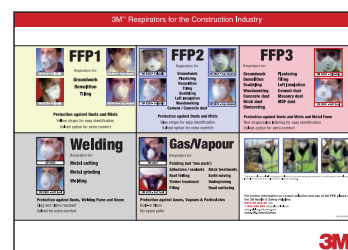
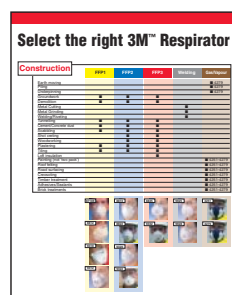
NEW!

A range of posters in Polish, aimed at highlighting the risks migrant construction workers are potentially posing to their health by failing to deploy appropriate hearing and respiratory protection.

PPE Selection

Our handy tools will help you with selection of the right PPE for the job.

- Printed selection guides and posters
- Online respirator and hearing protection selector tools at www.3M.co.uk/ohes



All of these materials are available free of charge from the 3M Health and Safety Helpline (details above)



**Occupational Safety Division
3M United Kingdom PLC**

3M Centre,
Cain Road,
Bracknell
Berkshire RG12 8HT
Tel: 0870 60 800 60
www.3M.co.uk/construction

3M Ireland

The Iveagh Building
The Park
Carrickmines
Dublin 18
Tel: 1800 320 500
www.3M.co.uk/construction

3M, Dect-Com, E-A-R, E-A-RCaps, E-A-R Express, Fahrenheit, Flexicap, LED Light Vision, Lite-Com, Maxim, Metalliks, Optime, Peltor, Push-Ins, Safety-Walk, Speedglas, Tora, Solus and Ultrafit are trademarks of the 3M Company. Please recycle. Printed in the United Kingdom.
© 3M 2010. All rights reserved.